US 20110085705A1

(19) United States

(12) Patent Application Publication

(10) Pub. No.: US 2011/0085705 A1

(43) Pub. Date: Apr. 14, 2011

Izadi et al.

(54) **DETECTION OF BODY AND PROPS**

(75) Inventors: **Shahram Izadi**, Cambridge (GB); **Jamie Shotton**, Cambridge (GB); **John Winn**, Cambridge (GB); **Antonio Criminisi**, Hardwick (GB); **Otmar Hilliges**, Cambridge (GB); **Mat Cook**, Cambridge (GB); **David Molyneaux**, Cambridge (GB)

(73) Assignee: **MICROSOFT CORPORATION**, Redmond, WA (US)

(21) Appl. No.: **12/972,837**

(22) Filed: **Dec. 20, 2010**

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/454,628, filed on May 20, 2009.

(60) Provisional application No. 61/174,878, filed on May 1, 2009.

Publication Classification

(51) **Int. Cl.**
G06K 9/00 (2006.01)

(52) **U.S. Cl.** **382/103**

(57) **ABSTRACT**

A system and method for detecting and tracking targets including body parts and props is described. In one aspect, the disclosed technology acquires one or more depth images, generates one or more classification maps associated with one or more body parts and one or more props, tracks the one or more body parts using a skeletal tracking system, tracks the one or more props using a prop tracking system, and reports metrics regarding the one or more body parts and the one or more props. In some embodiments, feedback may occur between the skeletal tracking system and the prop tracking system.